

REMARKS

Claims 75 -109 are pending in this application. Claims 75, 88, and 101 are amended to clarify the scope of the invention. Amendments are supported by the specification at, for example, pp. 19-20. No new matter has been added.

35 U.S.C. 102(b)

Claims 75, 78, 80-83, 88, 91, 93-96, 101 and 102

Claims 75, 78, 80-83, 88, 91, 93-96, 101 and 102 stand rejected under 35 U.S.C. 102(b) as being anticipated by Bonnet et al. "Organic Solar Cells - an Experimental Study," 13TH European Photovoltaic Solar Energy Conference, October 23-27, 1995, pp. 1685-1688 (hereinafter "*Bonnet*").

Applicants respectfully assert that *Bonnet* does not teach at least:

- a first organic photosensitive subcell ... having a first absorption characteristic;
- a second organic photosensitive subcell ... having a second absorption characteristic, wherein the second absorption characteristic is different from the first absorption characteristic,

as recited in independent claim 75;

- a first organic photosensitive subcell having a first spectral sensitivity ...;
- a second organic photosensitive subcell ... having a second spectral sensitivity that is different from the first spectral sensitivity,

as recited in independent claim 88; or

- a plurality of organic photosensitive subcells ... ;
- wherein the plurality of organic photosensitive subcells is comprised of subcells having dissimilar absorption characteristics,

as recited in independent claim 101.

Bonnet relates to an experimental study conducted to obtain data on organic thin film solar cells. Thin film p-n junctions comprising Cu-Pc and MPP were examined (see page 1685). *Bonnet*'s Fig. 3 shows a typical spectral response of a p-n structure fabricated using Cu-Pc and MPP. *Bonnet* supposes that the spectral response is comprised of the individual absorption curves of the constituent materials (i.e., Cu-Pc and MPP). See p. 168 col. 1.

Bonnet discloses a stacking of two tandem cells. (see page 1687). But, the individual

sub-cells in the stack are both the CuPc / MPP cells described earlier in the reference. *Bonnet* is very specific on this point, teaching a transparent contact between the MPP of one cell and the CuPc of the other. *Bonnet*'s stacked subcells are therefore identical in construction and, as subcell units, cannot exhibit first and second absorption characteristics, first and second spectral sensitivities, or have different absorption characteristics as recited in independent claims 75, 88, and 101, respectively. *Bonnet* specifically teaches such stacking to "increase the total field region." (page 1687). I.e., the stacking of *Bonnet* is directed to increasing the thickness of material that is absorbing light of a particular spectra, and is *not* directed to increasing the range of wavelengths that may be absorbed.

Claims 75, 88 and 101 of the present application, by way of contrast, teach stacked subcells having *different* absorption characteristics / spectral sensitivities, *i.e.*, there is at least one difference between the light absorbing materials that contributes to photocurrent in the different subcells. As a result, the *range* of wavelengths that may be absorbed may be increased relative to a single cell, or a stack of cells that use the same materials. This feature may be important, for example, to absorb a larger fraction of the range of wavelengths available in the solar spectra, leading to a more efficient solar cell.

Accordingly, for all the reasons stated above, the 35 U.S.C. § 102(b) rejection of independent claims 75, 88, and 101 should be withdrawn. Furthermore, as claims 78, 80-83, 91, 93-96, and 102, depend from independent claims 75, 88, or 101, the 35 U.S.C. § 102(b) rejection of dependent claims 78, 80-83, 91, 93-96, and 102, should also be withdrawn.

35 U.S.C. 103(a)

Claims 85-87, 98-100, 105, 106 and 109

Claims 85-87, 98-100, 105, 106 and 109 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Bonnet* as applied to claims 75, 78, 80-83, 88, 91, 93-96, 101 and 102. No other art is cited in the 103(a) rejections of the above-identified claims.

Each of these claims is dependent upon one of the independent claims discussed above with respect to the 35 USC 102 rejection, and are allowable for at least the same reasons. The further discussion in the 103 rejection does not address the *Bonnet* reference's lack of stacked subcells having different absorption characteristics. The Applicants silence with respect to the additional grounds for rejection does not indicate acquiescence.

Claim Objections

Claims 76, 77, 79, 84, 89, 90, 92, 97, 103, 104 and 107 stand objected to as dependent upon a rejected base claim, but allowable if rewritten in independent form. The Applicant gratefully acknowledges the indication that these claims are allowable if rewritten in independent form, but believes that the amendments to the base claims, as discussed above, address this objection without the need for amendment. Applicant respectfully requests reconsideration and withdrawal of the objection.

CONCLUSION

The Applicants respectfully request the reconsideration and withdrawal of all pending rejections and objections, and allowance of the claims.

The Commissioner is hereby authorized to charge any fees and credit any overpayments associated with this filing to Kenyon & Kenyon Deposit Account No. 11-0600.

Respectfully submitted,



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